BUREAU OF HIGHWAYS
REQUEST FOR PROPOSAL
for
QUALIFICATIONS BASED SELECTION FOR PREQUALIFIED SERVICES

The Michigan Department of Transportation (MDOT) is seeking professional services for the project contained in the attached scope of services.

If your firm is currently prequalified for this type of work and you are interested in providing services, please indicate your interest by submitting a Proposal. The Proposal must be submitted in accordance with the latest "Vendor Selection Guidelines for Service Contracts", available on the MDOT website.

For efficiency sake, we are asking that the vendor firm provide 3 paper copies of the Proposal to Lynne Herf, the MDOT project manager named in the attached scope of services.

These copies must be received by **12 noon, April 6, 2005.** Fax and electronic copies are not acceptable.

In addition, provide one unbound copy to:

Regular Mail:
Secretary, Operations Contract Support
Michigan Department of Transportation
P.O. Box 30050
Lansing, MI 48909

OR

Overnight Mail:
Secretary, Operations Contract Support
Michigan Department of Transportation
425 W. Ottawa
Lansing, MI 48933

This copy is to be received within three working days after the due date and time specified above. Please do not deliver in person.

Any questions relative to the scope of services must be submitted by e-mail to the MDOT project manager. Any questions must be asked at least three working days prior to the due date and time specified above. All questions and their answers will be placed on the MDOT website as soon as

possible after receipt of the questions. The names of vendors submitting questions will not be disclosed.

For a cost plus fixed fee contract, the selected vendor must have a cost accounting system to support a cost plus fixed fee contract. This type of system has a job-order cost accounting system for the recording and accumulation of costs incurred under its contracts. Each project is assigned a job number so that costs may be segregated and accumulated in the vendor's job-order accounting system.

The selection team will review the information submitted and will select the firm considered most qualified to perform the engineering services based on the proposals. The selected vendor will be contacted to confirm capacity. Upon confirmation, that firm will be asked to prepare a priced proposal. Negotiations will be conducted with the firm selected.

The maximum allowable pages for your proposal shall follow the guidelines detailed in Exhibit F of the Vendor Selection Guidelines (October 2004) for $100,000/$500,000. References/Past Performance (1 page limit) and QA/QC (1 page limit) are required and will be scored.

MDOT is an equal opportunity employer and MDOT DBE firms are encouraged to apply. The participating DBE firm, as currently certified by MDOT's Office of Equal Opportunity, shall be listed in the Proposal.

The scope of services is attached to this solicitation.

PROJECT LOCATION: M-17 between US-12BR MIchigan Avenue and US-12 in Ypsilanti Township, Washtenaw County
CONTROL SECTION, JOB NUMBER: CS 81082 JN 46086C
DESCRIPTION OF WORK: Mill and resurface

I Primary Prequalification Classification:

Roads and Streets

II Secondary Prequalification Classification:

Maintaining Traffic Plans & Provisions
Road Design Surveys
Safety Studies
Traffic Signal Design

The anticipated start date of the service is **7/1/05**
The anticipated completion date for the service is **4/7/07**

DBE Requirement: 10 %

MDOT Project Manager:

Lynne Herf, Project Manager
MDOT Brighton Transportation Service Center
10321 E Grand River, Suite 500
Brighton, MI 48116
Email: herfl@michigan.gov

SCOPE OF DESIGN SERVICES
CS 81082 JN 46086C
M-17 between US-12BR Michigan Avenue and US-12 in Ypsilanti Township, City of Ypsilanti, Washtenaw County

I. SCOPE OF CONSULTANT DUTIES

Complete the design of this project including, but not limited to the following:

A. Perform design surveys (See Attachment A)

B. Prepare required plans, typical cross-sections, details, and specifications required for design and construction.

C. Compute and verify all plan quantities.

D. Prepare staging plans and special provisions for maintaining traffic during construction.

E. Prepare pavement marking plans and special provisions.

F. Perform a Crash Analysis for the 3R/4R Safety Review for the entire limits of the project. This shall include the last three (3) years of reliable data for the analysis period. . The CONSULTANT will be furnished three (3) years of data. The Final Report will be in letter format addressed to the Project Manager.

G. Perform detailed crash analyses for each Design Exception submitted. This crash analysis will be included as an attachment to the Design Exception.

H. Provide solutions to any unique problems that may arise during the design of this project.

I. The Consultant may be required to provide Design Services during the construction phase of this project. If Construction Assistance is required, then a separate authorization for those services will be issued.

II. PROJECT LOCATION

The project is located on M-17 from US-12BR Michigan Avenue and US-12 in Ypsilanti

Township, Washtenaw County. The project length is 1.8 miles.

III. PROJECT DESCRIPTION

This project consists of all work related to designing this mill and resurfacing project, including but not limited to the following:

1. Cold milling and HMA Resurfacing
2. Intermittent curb replacement
3. Guardrail upgrades
4. Minor storm sewer repairs/upgrades if needed

Work shall conform to current MDOT, FHWA, and AASHTO practices, guidelines, policies, and standards (i.e., Road Design Manual, Standard Plans, Drainage Manual, Roadside Design Guide, A Policy on Geometric Design of Highways and Streets, Michigan Manual of Uniform Traffic Control Devices, etc.).

IV. PROJECT CONSTRUCTION COST

A. The estimated cost of construction is: $ 1,424,000

The above construction total is the amount of funding programmed for this project. The Consultant is expected to design the project within the programmed amount.

If at any time the estimated cost of construction varies by more than 5% of the current programmed amount, then the Consultant will be required to submit a letter justifying the changes in the construction cost estimate.

V. PROJECT SCHEDULE

The scheduled Consultant's plan completion date for this project is **6/1/06** The Consultant shall use the following events to prepare the proposed implementation schedule as required in the Guidelines for the Preparation of Responses on Assigned Design Services Contracts. These dates shall be used in preparing the Consultant's Monthly Progress Reports.

Target Date	Task #	Description
	3330	Conduct Design Survey
		Submit Survey Final Deliverables

	3360	Prepare Base Plans
		Submit Base Plans
	3380	Review Base Plans
	3390	Develop the Construction Zone Traffic Control Concepts
		Submit Plans for Utility Review (approximately 50% complete)
		Submit Environmental Permit Information (6 months prior to the Plan Completion Date)
	3540	Develop Construction Zone Traffic Control Plan
	3552	Develop Preliminary Permanent Pavement Marking Plan
	3580	Develop Preliminary Plans
12/15/05		Submit Preliminary Plans
1/15/06	3590	Review Preliminary Plans (The Plan Review)
	3822	Complete Permanent Pavement Marking Plan
	3830	Complete the Construction Zone Traffic Control Plan
	3840	Develop Final Plans and Specifications
4/7/06		Submit Final Plan/Proposal Package to MDOT for final review
	3870	Hold Omissions/Errors Check (OEC) Meeting
4/27/06		Omissions/Errors Check (OEC) Meeting (approximate date)
6/1/06		Consultant's Plan Completion: Final Construction Plan/Proposal package with recommendations incorporated to MDOT (two weeks after OEC Meeting)
2/1/07		Final Deliverables to MDOT

VI. PAYMENT SCHEDULE

Compensation for this Scope of Design Services shall be on an actual cost plus fixed fee basis.

VII. MONTHLY PROGRESS REPORT

On the first of each month, the Consultant Project Manager shall submit a monthly project progress report to the MDOT Project Manager:

Lynne Herf, Project Manager
MDOT Brighton Transportation Service Center
10321 E Grand River, Suite 500
Brighton, MI 48116
Email: herfl@michigan.gov

The monthly progress report shall follow the guidelines in Attachment F.

VIII. FORMAT

Full size plans (cut size 24" x 36") and half size (cut size 11" x 17") consisting of plan sheets and profile sheets will be required. The project will require a ratio (scale) of 1:50.
Other plan sheets that are required for this project shall be completed by the Consultant. These include, but are not limited to the following plan sheets:

A. The title sheet. MDOT will provide a map of the area on a disk in our workstation format. If the map is not available, MDOT will provide a map that could be used. The Consultant shall be responsible for any revisions to the title sheet and the title sheet and map shall meet MDOT format and layout guidelines.

B. Note Sheet.

C. Typical Cross-Sections.

D. Project specific Special Details.

E. Construction staging and traffic control plans. Possible traffic signal staging.

F. Detail grade sheets for major intersections, ramp gores and critical areas.

G. Paving details.

H. Pavement marking plan(s).

I. Culvert detail sheet(s).

J. Vicinity and drainage map sheet.

K. Alignment sheet.

L. Witness and benchmark sheet(s).

M. Soil boring log sheet(s).

All plans, special provisions, estimates, and other project related items shall meet all MDOT requirements and detailing practices (i.e., format, materials, symbols, patterns, and layout) or as otherwise directed by the Project Manager.

All plans, specifications, and other project related items are subject to review and approval by MDOT.

IX. UTILITIES

The Consultant shall be responsible for obtaining and showing on the plans the location and names of all existing utilities within the limits of the project. In the course of resolving utility conflicts, the Consultant shall make modifications to the plans or design details and provide assistance as directed by the MDOT Utility Permits Engineer and/or Project Manager. The Consultant shall attend any utility meetings called to ensure that the concerns are addressed on the plans involving utilities. The Consultant shall assist in the review of utility permit requests to ensure compatibility with the project.

X. TRAFFIC CONTROL AND MDOT PERMITS

The Consultant shall be responsible for all traffic control required to perform the tasks as outlined in this Project Scope of Design Services.

The Consultant shall be responsible for obtaining up to date access permits and pertinent information for tasks in MDOT Right of Way (ROW). This information can be obtained through Pam Sebenick, Utilities/Permits Section, Real Estate Division at (517) 373-7680

XI. PRE-QUALIFICATION AND SUBCONTRACTING OF CONTRACT WORK

Any task(s) for which the Consultant is not prequalified must be completed by a Subcontractor that is pre-qualified for that task(s). Any questions regarding prequalification should be directed to Phil Brooks, Prequalification Manager, at (517)335-2514.

The Department's prequalification is not a guarantee or warranty of the subcontractor's ability to perform or complete the work subcontracted. The Consultant remains fully responsible to the Department for completion of the work according to the authorization as if no portion of it had been subcontracted.

All subcontractor communications with the Department shall be through the Consultant to the MDOT Project Manager. This requirement may be waived if a written communication plan is approved by the MDOT Project Manager.

The Department may direct the immediate removal of any subcontractor working in violation of this subsection. Any costs or damages incurred are assumed by the Consultant by acceptance of the authorization. It is further understood that the Consultant's responsibilities in the

performance of the contract, in case of an approved subcontract, are the same as if the Consultant had handled the work with the Consultant's own organization.

XII. CONSULTANT RESPONSIBILITIES (GENERAL)

1. Meet with the MDOT Project Manager to review project, location of data sources and contact persons, and review relevant MDOT operations. The Consultant shall review and clarify project issues, data needs and availability, and the sequence of events and team meetings that are essential to complete the design by the project plan completion date. Attention shall be given to critical target dates that may require a large lead time, such as geotechnical requirements, ROW submittal dates, Railroad coordination requirements, utility conflict resolution, local agency meetings, etc.

2. Maintain a Design Project Record which includes a history of significant events (changes, comments, etc.) which influenced the development of the plans, dates of submittals and receipt of information.

3. **P/PMS TASK 3330 - CONDUCT DESIGN SURVEY**
   Perform surveys as necessary to design this project (see Attachment A) The Consultant's survey shall be as complete and accurate as necessary to:
   1. Calculate and verify plan quantities to the Consultant's standards.
   2. Locate and lay out the future construction of this project.
   3. Perpetuate affected property controlling corners for monument preservation.

   As part of the PRICED proposal, the Consultant shall present a detailed survey work plan for review, evaluation and acceptance by the MDOT Project Manager. A final survey report for review and approval by the MDOT Survey Unit **is** required. Acceptance of the survey by MDOT Design Survey does not in any way relieve the Consultant of responsibility and liability for the content of the survey.

4. **P/PMS TASK 3360 - PREPARE BASE PLANS**
   See Consultant Manual for details.

5. **P/PMS TASK 3380 - REVIEW BASE PLANS**
   See Consultant Manual for details.

6. **P/PMS TASK 3390 - DEVELOP THE CONSTRUCTION ZONE TRAFFIC CONTROL CONCEPTS**
   See Consultant Manual for details.

7. Perform storm sewer design calculations, including appropriate outlets and energy dissipation if necessary, as outlined in the MDOT Drainage Manual. Detention may be required. Detention pond design must meet, but is not limited to, local agency storm water regulations and Michigan Department of Environmental Quality water quality permit requirements. Submit all design calculations, drainage maps, and proposed profiles to the MDOT Project Manager for review prior to the Plan Review.

8. The consultant shall identify the locations of any water main and/or sanitary sewer on the project.

9. If watermains and/or sanitary sewers are present within the project limits, the CONSULTANT shall evaluate the necessity for the relocation of water mains and sanitary sewers, in accordance with Design Division's Informational Memorandum #441B and #402R dated April 13, 1992. The CONSULTANT shall submit a report to Steven J. Urda, Design Engineer - Municipal Utilities, Design Division for review and concurrence. A copy of the report shall be sent to the Project Manager. **If relocation is necessary and watermain and/or sanitary sewer work is not part of the Scope of Work, contact the MDOT Project Manager immediately.**

10. **P/PMS TASK 3540 - DEVELOP CONSTRUCTION ZONE TRAFFIC CONTROL PLAN**
See Consultant Manual for details.

11. **P/PMS TASK 3552 - DEVELOP PRELIMINARY PERMANENT PAVEMENT MARKING PLAN**
See Consultant Manual for details.

12. **P/PMS TASK 3580 - DEVELOP PRELIMINARY PLANS**
See Consultant Manual for details.

13. **P/PMS TASK 3590 - REVIEW PRELIMINARY PLANS (THE PLAN REVIEW)**
See Consultant Manual for details.

14. **P/PMS TASK 3822 - COMPLETE PERMANENT PAVEMENT MARKING PLAN**
See Consultant Manual for details.

15. **P/PMS TASK 3830 - COMPLETE THE CONSTRUCTION ZONE TRAFFIC CONTROL PLAN**
See Consultant Manual for details.

16. **P/PMS TASK 3840 - DEVELOP FINAL PLANS AND SPECIFICATIONS**

see Consultant Manual Attachment E for details.

17. **P/PMS TASK 3870 - HOLD OMISSIONS/ERRORS CHECK (OEC) MEETING**
See Consultant Manual for details.

18. **P/PMS TASK 5010 - CONSTRUCTION PHASE ENGINEERING AND ASSISTANCE**
The Consultant may be required to provide Design Services during the construction phase of this project. If Construction Assistance is required, then a separate authorization for those services will be issued.

19. If excavation is required, submit the excavation locations which may contain contamination. Project Manager then can proceed in requesting a Preliminary Project Assessment (PPA).

20. The Consultant shall be required to prepare and submit a CPM network for the construction of this project. See Attachment E for details

21. The Consultant representative shall record and submit type-written minutes for all project related meetings to the MDOT Project Manager within two weeks of the meeting. The Consultant shall also distribute the minutes to all meeting attendees. MDOT will provide and distribute official meeting minutes for the Base Plan Review Meeting (if meeting necessary) and The Plan Review Meeting.

22. Attend information meetings (i.e., public hearings, open houses, etc.) with the public and public officials to assist in responding to concerns and questions. May require the preparation of displays such as maps, marked-up plans, etc.

23. Prepare and submit any information, calculations, hydraulic studies, or drawings required by MDOT for acquiring any permit (ie. NPDES, DEQ, etc), approvals (ie. county drain commission) and related mitigation. MDOT will submit permit requests.

24. Attend any project-related meetings as directed by the MDOT Project Manager.

25. The Consultant shall assist in the review of driveway and utility permit requests, incorporate the information in the design plans and respond within 2 weeks from receipt of the permit.

26. The MDOT Project Manager shall be the official MDOT contact person for the Consultant **and shall be made aware of all communications regarding this project**. The Consultant must either address or send a copy of all correspondence to the MDOT Project Manager. This includes all Subcontractor correspondence and verbal contact records.

27. The Consultant shall contact the MDOT Project Manager whenever discoveries or design alternatives have the potential to require changes in the scope, limits, quantities, costs, or right-of-way of the project.

XIII. MDOT RESPONSIBILITIES (GENERAL)

1. Schedule and/or conduct the following:
    1. Project related meetings.
    2. The Plan Review
    3. Utility Meetings.
    4. Quantity summary sheets and final item cost estimates.
    5. Packaging of plans and proposal.

2. Furnish Special Details and pertinent reference materials.

3. Furnish prints of an example of a similar project and old plans of the area, if available.

4. Supply information on existing pavement structure as necessary.

5. Coordinate any necessary utility relocations.

6. Furnish pavement core information (Consultant shall place information on plan sheets).

7. Furnish pavement core information as necessary (Consultant shall place information on plan sheets).

8. Pavement design

9. Furnish diskette of file and instructions for the MDOT Stand Alone Estimator's Worksheet (SAEW).

CONSULTANT PAYMENT:

All invoices/bills for services must be directed to the Department and follow the 'then current' guidelines. The latest copy of the "Professional Engineering Service Reimbursement Guidelines for Bureau of Highways" is available on MDOT's Bulletin Board System. This document contains instructions and forms that must be followed and used for invoicing/billing; payment may be delayed or decreased if the instructions are not followed.

Payment to the Consultant for Services rendered shall not exceed the "Cost Plus Fixed Fee Not to Exceed Maximum Amount" unless an increase is approved in accordance with the contract with the Consultant. All invoices/bills must be submitted within 14 calendar days of the last date of services being performed for that invoice.

Direct expenses will not be paid in excess of that allowed by the Department for its own employees. Supporting documentation must be submitted, with the invoice/bill, for all billable expenses on the Project. The only hours that will be considered allowable charges for this contract are those that are directly attributable to the CE activities of this Project. Hours spent in administrative, clerical, or accounting roles for billing and support, are not considered allowable hours; there will be no reimbursement for these hours.

Reimbursement for overtime hours will be limited to time spent on this project in excess of forty hours per week. Any variations to this rule should be included in the price proposal

ATTACHMENT A
CS 81082 JN 46086C
M-17 between US-12BR Michigan Avenue and US-12 in Ypsilanti Township, City of Ypsilanti, Washtenaw County

SURVEY SCOPE OF WORK

SURVEY PREQUALIFICATIONS: Road Design Surveys.

MAPPING LIMITS: M-17 from US-12 BR to the 22 foot point of the ramps onto US-12. Specific tasks include best fit alignment, utility research and location and hard surface observations on all superelevated curves. A detailed work plan MUST be developed between the consultant engineering and surveying staff and presented to MDOT for review. A PORTFOLIO as outlined in this section IS REQUIRED.

NOTES: Questions must be submitted in writing at least three (3) days before the proposal is due so they can be posted on the web. NO VERBAL ANSWERS WILL BE PROVIDED UNTIL AFTER A CONSULTANT HAS BEEN CHOSEN BY THE SELECTION COMMITTEE AND APPROVED BY THE SELECTION REVIEW COMMITTEE.

The Consultant surveyor must contact the Region Traffic and Safety Engineer for work restrictions, proper safety devices and procedures in the project area prior to submitting a PRICED proposal.

A **detailed Survey Work Plan** with a **spreadsheet estimate** of hours by specific survey task such as traversing, leveling, mapping, etc., **must** be included in the project PRICED proposal.

It is the responsibility of the Professional Surveyor to safeguard all corners of the United States Public Land Survey System, published Geodetic Control and any other Property Controlling corners that may be in danger of being destroyed by the proposed construction project.

GENERAL REQUIREMENTS:

1. Surveys must comply with **all Michigan law** relative to land surveying.

2. Surveys must be done under the **direct supervision** of a Professional Surveyor licensed to practice in the State of Michigan.

3. Work in any of the following categories of survey: Road Design, Bridge, Hydraulic,

Right-of-Way, Ground Control (Photogrammetric), and/or Geodetic control, must be completed by a survey firm which is pre-qualified by MDOT.

4. Surveys must meet all requirements of the Michigan Department of Transportation (MDOT) Design Surveys *Standards of Practice* dated April 1, 1998. Please contact the Design Survey office to clarify any specific questions regarding these standards.

5. Consultants must obtain all necessary permits, including an up-to-date permit from the MDOT Utilities Coordination and Permits Section, required to perform this survey on any public and/or private property.

1. The Consultant must contact any and all Railroads prior to commencing field survey on railroad property. The cost for any permit, flaggers and/or training that is required by the Railroad will be considered as a direct cost, but only if included in the Consultant's proposal.

2. The Consultant must adhere to all applicable OSHA and MIOSHA safety standards, including the appropriate traffic signs for the activities and conditions for this job. The cost for any traffic control devices that is required by the MDOT Traffic & Safety engineer will be considered as a direct cost, but only if included in the Consultant's proposal.

8. Consultants are responsible for a comprehensive and conscientious research of all records, including MDOT records, essential for the completion of this project.

9. Measurements, stationing, recorded data, and computations must be in international feet, unless specified otherwise by the Project Manager.

10. Coordinate values shall be based upon the Michigan State Plane coordinate system NAD83, as previously surveyed by and for MDOT as outlined in PA 9 of 1964 as amended. All elevations must be based upon the North American Vertical Datum of 1988 (NAVD88). **Other datums must be approved by the MDOT Design Division, Supervising Land Surveyor or Region Surveyor**. A preliminary submittal of the adjusted horizontal and vertical control for the project may be submitted to a Survey Consultant Coordinator for review and acceptance as soon as it is available.

11. The survey notes must be submitted to the Design Survey Unit in 10" by 12" divided portfolios with flap covers. As many portfolios should be used as are needed to contain all of the required documents and Compact Discs.

12. Each portfolio must be labeled on the outside as in the following example:

Survey Notes for:
Route, Location and Project Limits [ ]
Control Section [ ] Job Number [ ] Date [ ]
By [ ]
Michigan Professional Surveyor [ ] License # [ ]

13. Each submittal is to be divided into five sections. These sections are to be labeled as follows: **Administrative, Alignment, Control**, **Property**, **Mapping**, and **Miscellaneous**. Each pocket is delineated in detail under FINAL REPORT: DELIVERABLES located at the end of this Attachment.

14. Each category of survey must be packaged separately (i.e., Bridge surveys separate from Road surveys and Hydraulic surveys). All sheets in a portfolio must be marked with the control section and job number. CD's must be labeled with the control section, job number, data type and file names.

15. The Consultant representative shall record and submit typewritten minutes for all project related meetings to the MDOT Project Manager within two weeks of the meeting. The Consultant shall also distribute the minutes to all meeting attendees.

16. The MDOT Project Manager is the official contact for the Consultant. Michael C. Barger, PS, Survey Consultant Project Manager, prepared this survey scope and can be reached at 517-241-3431 or by email at bargerm@michigan.gov. The Consultant must either address, or send a copy of all correspondence to the MDOT Project Manager. The MDOT Project Manager shall be made aware of all communications regarding this project. Any survey related questions regarding this project should be directed to a Survey Consultant Coordinator.

At the completion of this survey and prior to beginning the design of this project, all field survey notes, all electronic data, and all research records obtained for this project will be considered the property of MDOT and **must be sent to** MDOT, Design Division, Supervising Land Surveyor, P.O. Box 30050, Lansing, MI 48909. Please use MDOT's Form 222(3/99) entitled "SURVEY NOTES: RECEIPT AND TRANSMITTAL" for all transmittals. A copy of this transmittal form must also be sent to the MDOT Project Manager for Design. It is recommended that the project's survey portfolios be submitted for review as soon as possible.

WORK RESTRICTIONS

The Consultant must call the MDOT Region or TSC Traffic and Safety Engineer before beginning work to inform him of surveying activity in the area. The Consultant is advised to discuss Traffic Control scenarios with the Traffic and Safety Engineer prior to submitting a PRICED proposal. The person to contact regarding this section is Wendy Ramirez, Brighton

TSC Traffic & Safety Engineer at 810-225-2626.

Traffic shall be maintained by the Consultant throughout the project in accordance with Sections 812 and 922 of the Standard Specifications for Construction, 2003 edition, and any supplemental specifications. All traffic control devices shall conform to the current edition, as revised, of the Michigan Manual of Uniform Traffic Control Devices (MMUTCD).

The Consultant must use MDOT standard lane closure "maintaining traffic" typicals for any and all lane closures and shoulder closures. Typical MDOT traffic control diagrams are available from the Traffic & Safety engineer.

FIELD SURVEY

The purpose of the field survey is to obtain all information and data required by the project design engineer, to leave control in the field for future construction staking, and to provide a sufficient history of the area to enable the MDOT Design Survey Unit to perform dependable surveys in the future. The consultant surveyor must discuss the scope of this survey with the project design engineer before initiating any work on this project. Notes of this meeting and a detailed Survey Work Plan with an estimate of hours broken down by specific survey task must be submitted to the Project Manager and Consultant Coordinator within two weeks of this meeting.

A planimetric and contour map must be provided for the area within the mapping limits. Scale will be 1 inch = 40 feet and contour interval must be two feet.

USE OF PREVIOUS DATA: The consultant is responsible for providing existing conditions within the mapping limits and providing proper control for the project to be relocated during the construction phase. Steps must be taken by the consultant to assure the previous data still resembles existing conditions. Any area of the mapping limits which is augmented with previous data and not field observations must be identified and addressed in the Surveyor's Report.

CONTROL

Control must be established throughout the project. This control is based on Michigan State Plane Coordinate System – South Zone horizontal datum and NAVD 88 (2003) vertical datum. All subsequent control must be based on the established control. Any traverse points or bench marks must follow the Michigan Department of Transportation (MDOT) Design Surveys *Standards of Practice* dated April 1, 1998 and be listed in the CONTROL pocket of the portfolio. Contact the Survey Project Manager for additional control in the area.

DRAINAGE STRUCTURE, UTILITY RESEARCH & LOCATION

All drainage structures must be located within the mapping limits. These structures include catch basins, curb and gutter, storm sewer manholes and culverts. Culvert location of the flowline with a description for the size and type must be included with an edge of bit location over the culvert and 25 feet North and South of the pipe on both sides of the roadway.

All manifestations of utilities must be located in the field. An attempt must be made and documented to contact each utility company in the area. Any as-builts must be depicted on the drawings, and any hard-copy as-builts must be converted to a digital PDF format file. An additional resource would be Pascal Bui, Utility/Drainage Engineer for MDOT – Brighton TSC at 810-225-2622.

BEST FIT ALIGNMENT

A best fit alignment is required throughout the project and must match as close as possible the stationing shown on right of way plans. A report must be prepared stating the Northing and Easting of the points of curvature and tangency, and giving the best fit radius, arc length, chord bearing and distance, and delta angle.

HARD SURFACE OBSERVATIONS

Hard surface observations are NOT needed throughout the project. Hard surface observations on all superelevated curves ARE REQUIRED for analysis and design modification. Cross sections must also be obtained at any bridge at the reference lines and at 50 foot intervals for 200 feet. These areas must be represented in a DTM.

GOVERNMENT CORNERS & ADJACENT PROPERTY

Any PLSS corners within the project limits must be recovered or established and tied to the project coordinate system.

All PLSS corners must be recorded in accordance with PA 74 of 1970, as amended, and all applicable administrative rules. LAND CORNER RECORDATION CERTIFICATES ARE NOT REQUIRED TO BE REFILED UNLESS A SIGNIFICANT CHANGE WAS MADE IN THE MAKEUP OF THE CORNER OR A SUBSTANTIAL NUMBER OF WITNESSES HAVE NOT BEEN FOUND. A copy of each recorded Land Corner Recordation Certificate must be submitted to the MDOT Design Survey Office as part of the final report. All PLSS corners located in hard surface roads must be protected by a monument box, regardless of impending construction. The consultant shall provide to the Survey Project Manager a list of any affected Government or Property Controlling Corners in the detailed work plan for discussion or approval.

The consultant surveyor must contact the County Surveyor prior to beginning work on the project to inform him of proposed corner perpetuation activities, and to obtain information pertinent to PLSS corners and/or property controlling corners affected by project construction. The Survey Supervisor for Washtenaw County is Lori Beyer, PS, Washtenaw County Road Commission, 555 North Zeeb Road, Ann Arbor, MI 48103, Phone 734-761-1500.

Adjacent property, including plats must be shown in the drawing file. An ASCII file of property owners, their tax description number and address must also be provided.

AFTER SURVEY CLEAN-UP

Once the survey is complete, all stakes must be removed to aid the maintenance crews. ANY BENCHMARKS, TRAVERSE POINTS, PRIMARY POINTS AND THEIR WITNESSES MUST REMAIN IN PLACE.

FINAL REPORT: DELIVERABLES

The final report for this project shall include the following:

1. In the first pocket of the portfolio, labeled **ADMINISTRATIVE**, the following will appear:
   a. MDOT's Form 222(3/99) entitled "SURVEY NOTES: RECEIPT AND TRANSMITTAL"
   b. the project's Professional Surveyor's Report on company letterhead consisting of the following:
      i) A comprehensive synopsis of the work performed on this project, signed by the project's Professional Surveyor.
      ii) The source and methods used to establish the project horizontal coordinates, elevations and alignment(s) for this project.
      iii) A detailed explanation of anything discovered during the survey of this project that may create a problem for the designer or another surveyor.
      iv) QA/QC checklist **MUST** be filled out and signed or the portfolio will be returned.
   c. CD with all documents scanned into PDF files. Each page must be depicted in a master PDF file and bookmarked for easy retrieval. An example can be provided upon request.

2. In the second pocket of the portfolio, labeled **ALIGNMENT**, the following will appear:
   a. A sketch of the alignment with the following expressed in feet:
      i) Stationing
      ii) Horizontal coordinates
      iii) curve data
      iv) alignment points found or set, including coordinates
      v) control points
      vi) reference lines and angles

vii) government corners

3. In the third pocket of the portfolio, labeled **CONTROL**, the following will appear:
   a. Least squares adjustments for the horizontal and vertical control.
   b. Text files in ASCII format, hard copy and on CD, which contain the witness lists for the horizontal alignment ties, horizontal control points, bench marks and government corners.

4. In the fourth pocket of the portfolio, labeled **PROPERTY**, the following will appear:
   a. Tax maps and descriptions with owner names, address and phone numbers
   b. Legible **recorded** copies of all Land Corner Recordation Certificates (LCRC) filed for the government corners specified in this scope of survey, used for computation of alignment or in danger of obliteration by impending road construction.

5. In the fifth pocket of the portfolio, labeled **MAPPING**, the following will appear:
   a. Drawing files (46086+?.dgn) generated from CAiCE that show the details of this survey. The format for the drawing file shall conform to all MDOT drafting standards pertaining to features display, level assignments, standard line weights and colors, standard text assignments, standard fonts and MDOT cell library assignments as listed in Attachments AA, B, C and D.
   b. A legible planimetric paper plot, including contours, of this project on the required sheet size and utilizing the most recent MDOT Design Division Feature Codes and Cell Library. Please refer to "Attachment AA" for Feature Code display criteria. The centerline alignment must be shown on this plot.
   c. Each plotted sheet must have the statement specified in the Standards of Practice for MDOT Design Surveys dated April 1, 1998 affixed to it. Each sheet must also be signed and sealed by a resident Professional Surveyor licensed in the State of Michigan who oversaw the assembly of the information and certifies to the accuracy of the plots.
   d. All field survey notes, electronic data and research records obtained for the project. It is not necessary to submit electronic raw survey data in hardcopy form.
   e. All supporting and supplemental information or data.
   f. Drainage structure inventory.
   g. An ASCII list of the name of each utility feature, its horizontal coordinates, elevation, closest station and the perpendicular distance from the specified station.
   h. Legible copies of the plans for all utilities located within the limits of this project, and an ASCII list of all utilities with installations in the project area noting utility name, address, phone number and contact person.
   i. Utility station and offset list. This can be combined into one file.

6. In the sixth pocket of the portfolio, labeled **MISCELLANEOUS**, the following will appear:
   a. Any photographs taken for clarity of an area
   b. Any newspaper clippings related to the project

c. Any information not covered in this scope that will be of benefit to the designer or another surveyor

7. Miscellaneous
   a. It is the responsibility of the consultant to insure that all electronic files submitted to MDOT conform to the required format and that all documents are legible.
   b. The consultant must organize and label the various sections of the portfolio as required by the Standards of Practice for MDOT Design Surveys dated April 1, 1998.
   c. Following are some guidelines that should be followed when preparing a CAiCE project to be submitted to MDOT:
      i) File naming conventions are appropriate
         (1) Project names will be the MDOT job number 46086C.
         (2) The description field should contain the route number and location as space allows:
            (a) M-17 from
         (3) DTM surface will always be EXSUP for Existing (not EXIST). If multiple surfaces are present, use EXSUP1, EXSUP2, etc.
         (4) Microstation files shall be the CAiCE project name plus a PL (PLanimetric).
      ii) Specific files or reports called out in the scope may be continued in the submitted CAiCE archive file (46086C.zip). This file is NOT created by WinZIP. They should, however, be copied separately to the project diskette with descriptive names such as benchlist.txt, control point witness.txt, etc. for convenient retrieval by the end user.
      iii) All research documents are required to be scanned and placed on the CD.

Attachment AA

CS 81082 JN 46086C

M-17 between US-12BR Michigan Avenue and US-12 in Ypsilanti Township, City of Ypsilanti, Washtenaw County

Point to be displayed by Cell only.

# ANC	Cell	# CEM	Cell	# GYP	Cell		
# HYD	Cell	# LBASE	Cell	# LP	Cell		
# MB	Cell	# MRSH	Cell	# NWLK	Cell		
# PH	Cell	# PLP	Cell	# POLE	Cell		
# POST	Cell	# PP	Cell	# PTWR	Cell		
# RIP	Cell	# RRSG	Cell	# RRSW	Cell		
# SGN	Cell	# SIG	Cell	# TPED	Cell		
# CATV	Cell	# PED	Cell				

Points by Cell and Description

# AZM	Cell, Desc	# BFR	Cell, Desc	# BSH	Cell, Desc
# CP	Cell, Desc	# CTRS	Cell, Desc	# ETB	Cell, Desc
# FLAG	Cell, Desc	# GFP	Cell, Desc	# GLM	Cell, Desc
# GPMP	Cell, Desc	# GPS	Cell, Desc	# GTU	Cell, Desc
# MBOX	Cell, Desc	# MEAN	Cell, Desc	# MISC	Cell, Desc
# NGS	Cell, Desc	# PIN	Cell, Desc	# PINE	Cell, Desc
# PIPE	Cell, Desc	# PK	Cell, Desc	# PLAT	Cell, Desc
# PROP	Cell, Desc	# QCOR	Cell, Desc	# QQCOR	Cell, Desc
# RM	Cell, Desc	# ROC	Cell, Desc	# RW	Cell, Desc
# SCOR	Cell, Desc	# SD	Cell, Desc	# SPKHD	Cell, Desc
# STA	Cell, Desc	# STMP	Cell, Desc	# TP	Cell, Desc
# TR	Cell, Desc	# TRAV	Cell, Desc	# TREE	Cell, Desc
# TSTHL	Cell, Desc	# USGS	Cell, Desc	# WEIR	Cell, Desc
# WIT	Cell, Desc	# WITPT	Cell, Desc		
# BCM	Cell, Desc				

Points by Cell and Elevation

# CB	Cell, Elev	# ELHH	Cell, Elev	# ELMH	Cell, Elev
# GVLV	Cell, Elev	# GWEL	Cell, Elev	# HI	Cell, Elev
# MH	Cell, Elev	# TMH	Cell, Elev	# SMH	Cell, Elev

# STMH	Cell, Elev	# UMH	Cell, Elev	# WSO	Cell, Elev
# WV	Cell, Elev	# WWEL	Cell, Elev		

Points by Description and Elevation

# CV	Desc, Elev.	# CMP	Desc, Elev.	# CPP	Desc, Elev.
# RCP	Desc, Elev.				

Points by Cell, Description and Elevation.

# BM	Cell, Desc, Elev.	# FL	Cell, Desc, Elev.
# HVCP	Cell, Desc, Elev.	# LO	Cell, Desc, Elev.
# RFPT	Cell, Desc, Elev.	# VCP	Cell, Desc, Elev.
# WELL	Cell, Desc, Elev.		

Survey Chains All of the following chains should be displayed in the final Drawing File:

#ABUT	# BC	# BEAM	# BIKE	# BLD	# BRL
# BRR	# CDR	# CL	# CLB	# CLV	# CMP
#CP	# CRK	#CTV	# DAM	# DCH	# DECK
#DIKE	# EB	# EC	# EG	# ELO	# ELU
# EM	# EW	# EWL	# FNC	# FOP	#FTG
# GAS	#GR	# GRG	# GUT	#H20	# HDG
# HSE	#HWAL	# LAKE	# MRSH	# NOIS	#OCHD
#OIL	# PATH	# PIER	#PLAT	#POND	# PROP
# RCP	# REFL	# RIP	# RIV	# ROC	# RR
#RTWL	# SAN	# SCL	#SHBL	# SHLD	#SNLI
# SPL	# SS	#STM	# STR	# STRM	# SW
# TELO	# TELU	# TGRPH	# TREL	# TRL	
# WEIR	# WWAL				

ATTACHMENT B

CS 81082 JN 46086C

M-17 between US-12BR Michigan Avenue and US-12 in Ypsilanti Township, City of Ypsilanti, Washtenaw County

ROAD

TEXT SIZES AND PLOTTING SCALES

WORKING UNITS:

MASTER UNITS	1 FT
SUB UNITS	1000 TH
POSITIONAL UNITS	1
WORKING AREA	4294967 SQ/FT
WORKING DIVISION	1000 TH/FT
ACCURACY	1 PU/TH

PROPOSED TEXT	HEIGHT	WIDTH	LINE SPACING
40 SCALE	4.8	4	3.2
50 SCALE	6	5	4
100 SCALE	12	10	8
EXISTING TEXT			
40 SCALE	3.2	2.4	1.6
50 SCALE	4	3	2
100 SCALE	8	6	4

Line weight = 0 for existing features

BRIDGE

TEXT SIZES AND PLOTTING SCALES

WORKING UNITS:

Master Units	1 FT
Per Master Unit	1000 TH

Positional Units 1

WORKING AREA	4294967 SQ/FT
WORKING DIVISION	1000 TH/FT
ACCURACY	1 PU/TH

PROPOSED TEXT	HEIGHT	WIDTH	LINE SPACING
40 SCALE	4.8	4	3.2
50 SCALE	6	5	4
100 SCALE	12	10	8
EXISTING TEXT			
40 SCALE	3.2	2.4	1.6
50 SCALE	4	3	2
100 SCALE	8	6	4

Line weight = 0 for existing features

ATTACHMENT C
CS 81082 JN 46086C
M-17 between US-12BR Michigan Avenue and US-12 in Ypsilanti Township, City of Ypsilanti, Washtenaw County

RECOMMENDED COLORS FOR MICROSTATION PROJECTS

1. AS A MINIMUM, DESIGNERS SHOULD MAINTAIN THE COLOR SCHEME THROUGHOUT A PROJECT, WHETHER IT IS BY LEVELS AND/OR BY UTILITIES, ETC.

2. UNTIL MDOT CONVERTS TO COLOR REPRODUCTION METHODS, DESIGNERS SHOULD LAUNCH BLACK AND WHITE PLOTS FOR MASS REPRODUCTION PURPOSES.

3. THE FOLLOWING IS A RECOMMENDED COLOR SCHEME FOR DESIGNERS TO USE, AS
A MINIMUM, TO HELP DISTINGUISH VARIOUS LEVELS, UTILITIES, ETC. ON MORE CONGESTED TYPE PROJECTS.

COLOR	**LINE OR SYMBOL**
RED (CO=3)	EX STORM SEWER, H.H., C.B. OR INLET TELEPHONE OR T.M.H. POWER CABLE, N.H. & ELEC H.H. DRAIN TILE OR PIPE LIGHT POST OR FLOOD LIGHT R.R. OR TRAFFIC SIGNAL POLICE OR FIRE CALL BOX CAUTION-CRITICAL NOTES/BOXES EXISTING BRIDGE LINES EX. PAVT., SIDEWALK, CURB & GUTTER, DRIVEWAYS GAS LINE, N.H. OR VALVE OIL PIPELINES GAS CAP, STOP VALVE OR DRIP
PURPLE (CO=5)	PROPERTY LINES, ROW PERMIT BOXES & NOTES, ROW LINES, PROPERTY OWNERSHIP ARROWS
BLUE (CO=1)	WATERLINE, M.H. OR VALVE FIRE HYDRANT WATER CAP OR METER

	STREAMS, LAKES, DRAINAGE COURSE, SPRINGS OR PONDS
	STEAM LINE OR VALVE
	EX. CONC BOX OR SLAB CULVERT
	EX. PIPE CULVERT
GREEN	EX SANITARY SEWER AND N.H.
(C0=2)	HEDGE FENCES, TREES, BRUSH AND WOODS, CONTOUR LINES, SWAMPS OR MARSH

WHITE	PROPOSED PAVEMENT LINES
PLOTS BLACK	PROPOSED BOX OR SLAB CULVERTS
(CO=O)	PROPOSED DRAINAGE STRUCTURES & SEWERS
	SURVEY CENTERLINE, CONSTRUCTION CENTERLINE
	TYPE OF SOIL (MIAMI SERIES ETC.)
	POWER TRANSMISSION LINE
	FIBER OPTICS, CABLE TV

NOTE: THE COLOR YELLOW CAN BE USED AS A GOOD SUBSTITUTE FOR SCREEN PURPOSES, BUT IT DOES NOT PLOT WELL WITH CURRENT PLOTTERS

ATTACHMENT D

CS 81082 JN 46086C
M-17 between US-12BR Michigan Avenue and US-12 in Ypsilanti Township, City of Ypsilanti, Washtenaw County

ROAD DESIGN LEVELS

LEVEL 1 THRU 20 ARE FOR SHEET SET-UP AND TOPO

1	SHEET LAYOUT, NORTH ARROW
2	BENCHMARKS, GOVERNMENT CORNER, Right-of-Way, AND ALIGNMENT WITNESS (CONTINUOUS PROFILE SHEETS)
3	PLAN REVISION BOX (GRID ON SINGLE PROFILE SHEETS)
4	GRID (CONTINUOUS PROFILE SHEETS)
5	STATION ELEVATIONS (SINGLE PROFILE SHEETS)
6	STATION ELEVATIONS (CONTINUOUS PROFILE SHEETS)
7	TRAVERSE AND BASE LINES, LEFT SIDE ELEVATIONS (SINGLE PROF SHEETS)
8	SOIL SERIES INFO, BORING LOCATIONS, LEFT SIDE ELEVATIONS (CONTINUOUS PROFILE SHEETS)
9	SURVEY CENTERLINE, ALIGNMENT, LABELING
10	PATH AND TRAIL POINTS AND LINES
11	EXISTING EDGE OF PAVEMENT, EXISTING ABUTMENTS, CONCRETE BARRIER, ETC.
12	BUILDINGS, HOUSES, GARAGES
13	EXISTING FENCE LINES, RAILROADS, AIRPORTS, SIGNS, GUARDRAIL, ETC.
14	SIDEWALKS, DRIVES, TWO TRACKS
15	BELOW GROUND UTILITIES--GAS, WATER, ELECTRIC, TELE, LABELING, ETC.
16	ABOVE GROUND UTILITIES--POLES, TRANSMISSION LINES, LABELING, ETC.
17	EXISTING STORM AND SANITARY SEWERS, CATCH BASINS, MANHOLES
18	TREE, SHRUB, HEDGE, AND BRUSH LINES, AND SINGLE TREES
19	EXISTING CULVERTS, DRAINAGE COURSES, NATURAL WATER & WELLS, ETC.
20	CONTOUR LINES

21 THRU 49 ARE ROAD DESIGN LEVELS

21 PROPOSED ALIGNMENTS, TIES, LABELING
22 PROPOSED PC'S, P.T.'S, PI'S, TANGENTS & CURVE DATA
23 OPEN
24 SECTION CORNERS, GOVERNMENT LINES W/TIES (TWP/RANGE)
25 EXISTING R.O.W., ROAD NAMES, CITY LIMITS, SUBDIVISION PLAT NAMES
26 PROPOSED PAVEMENT, BRIDGES, RETAINING WALLS, GUARD RAIL, CURB,
GUTTER, SIDEWALK, DRIVEWAYS
27 PROPOSED RIGHT-OF-WAYS, LABELING, TIES, PERMITS
28 OPEN
29 REMOVAL ITEMS

30 PROPOSED DRAINAGE
31 PROPOSED SLOPE STAKE LINES
32 PROPOSED ELECTRIC
33 CONSTRUCTION NOTES (DRAINAGE & QUANTITIES)
34 PROPOSED WATER MAINS, WATER MAIN NOTES
35 PROPOSED ELECTRIC NOTES
36 MAINTAINING TRAFFIC

37 OPEN
38 CONSTRUCTION CHANGES & ALTERNATE ALIGNMENTS
39 SCRATCH LEVEL FOR WATER MAIN CHANGES
40 SCRATCH LEVEL FOR ELECTRIC CHANGES
41 PROFILE SHEET A - EXISTING GROUND
42 PROFILE SHEET B - EXISTING GROUND
43 PROFILE SHEET A - PROPOSED WORK
44 PROFILE SHEET B - PROPOSED WORK
45 BRACKETS & ELEVATIONS RIGHT SIDE (SINGLE PROFILE SHEETS)
46 BRACKETS & ELEVATIONS RIGHT SIDE (CONTINUOUS PROFILE SHEETS)
47 LANDSCAPING
48 OPEN
49 WETLAND CONTOURS, SIGNING

50 THRU 55 ARE FOR REAL ESTATE INFORMATION

50 PARCEL LINES, PARCEL NUMBERS, OWNERSHIP ARROWS
51 LOT LINES AND NUMBERS
52 PROPERTY CORNER INFORMATION
53 SPECIAL ROW NOTES AND DIMENSIONS
54 SPECIAL ROW NOTES AND DIMENSIONS
55 SPECIAL ROW NOTES AND DIMENSIONS

LEVELS 56 THRU 58 AND 63 ARE OPEN

59	HYDRO CHAINS AND POINTS
60	MISC AND REFERENCE LINES, ETC.
61	PLAT AND PROPERTY LINES AND POINTS
62	DTM BREAKLINES, DTM AND XYZ POINTS

ATTACHMENT E
CS 81082 JN 46086C
M-17 between US-12BR Michigan Avenue and US-12 in Ypsilanti Township, City of Ypsilanti, Washtenaw County

CONSTRUCTION CRITICAL PATH NETWORKS

I. INTRODUCTION

The Consultant is required to submit a Construction Critical Path Network at various points in the design process. Refer to the following:

P/PMS TASK 3580 - DEVELOP PRELIMINARY PLANS

P/PMS TASK 3830 - COMPLETE THE CONSTRUCTION ZONE TRAFFIC CONTROL PLAN

P/PMS TASK 3840 - DEVELOP FINAL PLANS AND SPECIFICATIONS

Construction Critical Path Networks are often needed to develop the progress schedule for a project. They are required on any project designated to include an Incentive/Disincentive or Special Liquidated Damages clause. Construction Critical Path Networks are also recommended for projects with the following characteristics:

1. New construction.
2. Major reconstruction or rehabilitation on an existing roadway that will severely disrupt traffic.
3. Unique or experimental work.
4. More than one construction season.
5. Complex staging (multiple stages with traffic shifts).

As noted in MDOT's Construction and Technology Instructional Memorandum 1997-7, Progress Schedule Determinations/Critical Path Rates,

> A*preparation of a Critical Path is a requirement on <u>all</u> consultant-designed projects, regardless of the project type or complexity.*@

The MDOT Resident Engineer assigned to the project should be consulted when developing Construction Critical Path Networks.

MDOT requires the precedence diagraming method. The Consultant will submit this network in MPX version 4.0.

II. NETWORK DEVELOPMENT

The network will be defined using the following steps.

1. Activity definition.
2. Activity sequencing.
3. Duration estimation.
4. Schedule development.

1. ACTIVITY DEFINITION

The Consultant will define the specific activities in enough detail so that the proper objectives will be met. The Consultant must identify assumptions (those factors considered true, real or certain). Supporting detail for the activities should be documented and organized as needed to simplify the review of the activities by MDOT personnel.

The Construction Critical Path Network must start with the ALetting Date@ as the first activity and terminate with the AEnd of Project@ as the finish activity.

A sufficient number of activities will be required with sufficient detail so that the controlling construction operation(s) may be identified. Notation on each activity shall include a brief work description and activity time duration.

2. ACTIVITY SEQUENCING

Activity sequencing involves identifying and documenting interactivity dependencies. The Consultant must sequence activities accurately to support later development of a realistic and achievable construction schedule. Two types of dependencies should be considered. Mandatory dependencies are inherent in the nature of the work being done, such as construction sequencing. Discretionary dependencies are based on a knowledge of the work to be done. Constraints are used to show how the activities relate to each. The Consultant must include documentation supporting all discretionary dependencies used in the project. All activities must lead to another activity. Only Start to Start, Finish to Finish and Finish to Start relationships will be allowed. All logic shall show how the given activity is dependent on its preceding activities.

3. DURATION ESTIMATION

After the Consultant has sequenced the activities, the Consultant should determine the activity duration. Activity duration estimating involves assessing the number of work periods likely to be needed to accomplish each activity. Duration (working days): No activity will have a duration greater than 20 working days unless approved by the Engineer. Activities that will be allowed to exceed 20 working days include, but are not

limited to, working drawing approvals or other activities not under the control of the Contractor. If requested by the Engineer, the Consultant shall explain the reasonableness of activity time durations. The approved MDOT production rates will be used in estimating activity duration. These are available in the Supplemental Information section of this attachment. The Consultant must document and submit all assumptions made during the duration estimation to MDOT.

4. SCHEDULE DEVELOPMENT

The activity sequencing, duration estimations and the calendars are combined to create the construction schedule. During the development of the schedule the Consultant will verify:

1. The required schedule to build the project.
2. The constructability of the project.
3. If the maintaining traffic scheme will work.
4. If seasonal limitations will affect the construction.
5. Any other project specific considerations.

The MDOT Calendars will be used by the Consultant in developing the network. The calendars are based on a 4, 5 or 6 day work week. The MDOT Calendars are included in the Supplemental Information section of this attachment.

At this point there should be no negative float in the network. If there is, there is an error in the network and the error must be corrected before network submittal.

All summary tasks shall be removed prior to submittal to MDOT Project Manager

III. DELIVERABLES

After this final step the design consultant will submit the finished CPM schedule to MDOT

1. Documents

A. 11" x 17" plot of the network. The critical path shall be clearly identified on the plot. A larger plot may be required for complex networks.

B. Work Day / Completion Date Determination Worksheet.

C. List of any other assumptions or controlling factors used in creating the network. For example, permit or maintaining traffic restrictions.

2. Electronic Format

This section sets the requirements for the electronic submittal of the Consultant=s Construction Network. All networks shall be submitted on a 3.5 inch floppy disk (or via E-mail) using one of the following formats:

A. **Standard Electronic Media Format:** This is a standard ASCII text file containing the data elements below, in the order specified. This file can be created using any text editor or word processing application (i.e., MS-Word, WordPerfect, Notepad, Write) but must be saved as an ASCII file.

The **first line** will provide a descriptive header describing the submittal and containing:

Control Section
Job Number
Route
Consultant name
Date of Submittal

The next line will be **blank**, followed by multiple data lines.

Each **data line** will contain one record pertaining to one task of the job. Separate data fields by a comma. Fields within each task line are as follows:

(Note that the term "task" is synonymous with "activity." Leave fields that are not required blank)

(1) Task # (Job # followed by a hyphen followed by this task's unique 4 digit task number. This is the Preceding Event Activity Code)
(2) Description of Task, Milestone or Hammock, blank if this record is a constraint
(3) Calendar (see attached list)
(4) Duration of task, blank for constraints
(5) Task # of the next task (Succeeding Event) - leave blank if this record is not a constraint or hammock
(6) Type of constraint (FS, SS, FF) - leave blank if this record is not a constraint.
(7) Delay, if required
(8) Original "Baseline" Start Date
(9) Original "Baseline" Finish Date
(10) Current (forecast) Start Date (early start)
(11) Current (forecast) Finish Date (early finish)
(12) Estimated completion date (if different from early start + current duration)
(13) Late Start Date
(14) Late Finish Date

(15) Actual Start Date
(16) Actual Finish Date

Example - each line contains the following:

Task # (preceding event), Description, Calendar, Duration, Next Task # (succeeding event), Constraint Type, Delay, Baseline Start, Baseline Finish, Early Start, Early Finish, Estimated Completion Date, Late Start, Late Finish, Actual Start, Actual Finish, Total Float.

B. **Primavera Project Planner(P3) 2.0 Export Procedure:** Users who have Primavera Project Planner(P3) version 2.0 can automatically create a export file by following the below export procedure below. **Users having an older version of Primavera may use the applications export feature only if they are able to include all the data elements listed in the version 2.0 format.**

1. Choose Tools, Project Utilities, **EXPORT**
2. Click **ADD**, Then click **OK** to accept the next sequential ID number, or type a unique number to identify the specifications and click **OK**
3. Enter a description for the specification in the Title field
4. Specify data items to export

Activities
- Select **Contents of List**
- Use the Description column to specify which data items to export
- To add items, click the right mouse button in the Description column and choose from the list. Suggested Items include: **Activity ID, Activity Description, Actual Start, Actual Finish, Calendar ID, Early Start, Early Finish, Late Start, Late Finish, Original Duration.**
- Select **All Current, All Target**, or **All Target2**
- Set Description Length to 48

OR

Constraints
- Select **Successor relationships** - Choose this option to export Activity IDs and their corresponding successors only. Lags and relationship types will also be displayed in this output file.

5. Click **FORMAT** in Export Dialog Box
6. In the Output file section, enter a new name and path (ex. A:\actexp or A:\conexp). Do not include a file extension.

7. In the type field, click the minimize button and choose the **[.PRN] - ASCII** file format for the output file.
8. Select **CALENDAR** for Date Format
9. Set ASCII Output Field Separation to **1** and Blank column width to **0**
10. Click **RUN**
11. In the Output Options dialog box, click on **OK**

NOTE: A COMPLETED FILE EXPORT WILL CONSIST OF 2 EXPORT FILES (ACTIVITIES & CONSTRAINTS)

C. **Microsoft Project Export Procedure:** Users of Microsoft Project Version 4.0 and above can create a Microsoft Project Exchange (MPX) file by following the procedure below.

1. Choose File, Save As from the main menu
2. In the Save File as Type box Select **MPX 4.0**
3. On the drive box select a: or whichever drive is the 3.5" Floppy drive
4. Click on **OK**

This saves the file in MPX format.

D. **Primavera Sure Track:** Users of Sure Track Version 2.0 and above can create a Microsoft Project Exchange (MPX) file by following the procedure below.

1. Choose File, Save As from the main menu
2. In the filename box input a filename
3. In the Save File as Type box Select **MPX**
4. On the drive box select a: or whichever drive is the 3.5" Floppy drive
5. Click on **OK**

This saves the file in MPX format

E. **Scitor Project Scheduler 7 Export Procedure:** Users of Scitor Project Scheduler Version 7 and above can create a Microsoft Project Exchange (MPX) file by following the procedure below.

1. Choose File, Save As from the main menu
2. In filename box select a filename
3. In the Save File as Type box Select MPX
4. On the drive box select a: or whichever drive is the 3.5" Floppy drive
5. Click on **OK**

This saves the file in MPX format

F. **Export Files with Other Scheduling Applications:** Most scheduling packages have export functions similar to those described above. If the Consultant chooses

to use packages with export capabilities, they shall include all items listed in the Standard Media Format in a text or ASCII type file.

IV. SUPPLEMENTAL INFORMATION

A. MDOT CRITICAL PATH-CONSTRUCTION TIME ESTIMATES

Drainage

Cross Culverts	
Rural Highways	40 m/day
Expressways	50 m/day
Large Headwalls	5 days/unit
Slab or Box Culverts	5 days/pour
Plowed in Edge Drain(production type project)	4500 m/day
Open Graded Underdrain(production type project)	1200 m/day
Sewers	
0m-5m(up to 1500mm)	40 m/day
0m-5m(over 1500mm)	25 m/day
5m-over(up to 1500mm)	25 m/day
5m-over(over 1500mm)	20 m/day
Jacked-in-place	13 m/day
including excavation pit & set up	min. 5 days
Tunnels	
hand mining	8 m/day
machine mining	20 m/day
including excavation pit & set up	min. 5 days
Manholes	3 units/day
Catch Basin	4 units/day

Utilities

Water Main(up to 400mm)	100 m/day
Flushing, Testing & Chlorination	4 days
Water Main(500mm-1050mm)	25 m/day
Flushing, Testing & Chlorination	5 days
Order & Deliver 600 mm HP Water Main	50 days/order
Gas Lines	100 m/day

Earthwork and Grading	**Metro Exp**	**Rural**
Embankment(CIP)	1500 m3/day	5300 m3/day
Excavation and/or Embankment(Freeway)	1500 m3/day	9200 m3/day
Excavation and/or Embankment(Reconstruction)	750 m3/day	3800 m3/day
Embankment(Lightweight Fill)	300 m3/day	600 m3/day
Muck(Excavated Waste & Backfill)		1500 m3/day
Excavation(Widening)		600 m/day
Grading(G & DS)		750m/day
Subbase and Selected Subbase(up to 7.4m)		600 m/day

Subbase and Selected Subbase(7.4 m & over)	450 m/day
Subgrade Undercut & Backfill	1500 m3/day
Subbase & Open-Graded Drainage Course	450 m/day

Surfacing

Concrete Pavement(7.3m)	450 m/day
Including Forming & Curing	min. 7 days
Bituminous Pavement(7.3m)	1200 m/day/course
Concrete Ramps(4.9m)	300 m/day
Including Forming & Curing	min. 7 days
Curb(1 side)	750 m/day
Concrete Shoulder-Median	1200 m2/day
Bituminous Shoulders(1 side per course)	750 m/day
Sidewalk	180 m2/day
Sidewalk(Patching)	65 m2/day

Structures

Sheeting(Shallow)	30 m/day
General Excavation at Bridge Site	750 m3/day
Excavation for Substructure(Footings)	1 unit/day
Piles(12m)	15 piles/day
Substructure(Piers & Abutments)	5 days/unit
Order and Delivery of Beams	
Plate Girders	100-120 days/order
Rolled Beams	90-120 days/order
Concrete Beams	50 days/order
Erection of Structural Steel	3 days/span
Bridge Decks	
Form & Place Reinforcement(60m Structure)	15 days
Pour Deck Slab(1 1/5 days/pour)	2 days/span
Cure	14 days
2 Course Bridge Decks	
Add 9 days for Second Course Latex	
Add 12 days for Second Course Low Slump	
Sidewalks and Railings	
Sidewalks and Parapets	5 days/span
Slip Formed Barriers	2 days/span
Clean Up	10 days
Pedestrian Fencing	
Shop Plan Approval & Fabrication	1-2 months
Erection	1 week/bridge

Rip Rap Placement	
Bucket Dumped	385 m^3/day
Bucket Dumped and Hand Finished	131-523 m^3/day
Retaining Walls	1 Panel/day min. 10 days
Railroad Structures	
Grade Temporary Runaround	750 m3/day
Ballast, Ties & Track	50 m/day
Place Deck Plates	5 days/span
Waterproof, Shotcrete & Mastic	5 days/span
Railroad Crossing Reconstruction	10-15 work days (depends on if concrete base is involved)
Temporary Railroad Structures	
Order & Deliver Steel	55 days/order
Erect Steel	1 day/span
Ties and Track	3 days/span
Pumphouse	
Structure	30 days/m
Order & Deliver Electrical & Mechanical Equipment	90 days
Install Electrical & Mechanical Equipment	30 days
Miscellaneous	
Removing Old Pavement	60 m/day
Removing Old Pavement for Recycling(7.3m)	450 m/day
Crushing Old Concrete for 6A or OGDC	1350 mtons/day
Removing Trees(Urban)	15 units/day
Removing Trees(Rural)	30 units/day
Removing Concrete Pavement	450 m2/day
Removing Sidewalk	250 m2/day
Removing Curb & Gutter	450 m/day
Removing Bituminous Surface	1600 m2/day
Conditioning Aggregate	900 m/day
Bituminous Base Stabilizing	2500 m2/day
Ditching	600 m/day

Trenching for Shoulders	750 m/day
Station Grading	610 m/day
Clearing	8000 m2/day
Restoration(Topsoil, Seeding, Fertilizer & Mulch)	1650 m2/day
Sodding	2100 m2/day
Seeding	40000 m2/day
Guard Rail	230 m/day
Fence(Woven Wire)	360 m/day
Fence(Chain Link)	150 m/day
Clean Up	600 m/day
Concrete Median Barrier	300 m/day
Cure	min. 7 days
Reroute Traffic(Add 4 days if 1st item)	1 day/move
Concrete Glare Screen	450 m/day
Light Foundations	6 units/day
Order & Delivery	6-8 week/order
Remove Railing & Replace with Barrier(1 or 2 decks at a time)	4 days/side
Longitudinal Joint Repair	1600 m/day
Crack Sealing	4800 m/day
Joint and Crack Sealing	500 m/day
Repairing Pavement Joints - Detail 7 or 8	200 m/day
Seal Coat	6400 lane m/day
Diamond Grinding/Profile Texturing Concrete	3300 m2/day
Rest Area Building	
Order Material	3 months
Construct Building	9 months
Tower Lights	
Order and Deliver Towers	100 days
Weigh-In-Motion	
Order and Deliver Materials	1 month-6weeks
O & D with Installation	3 months
Raised Pavement Markers	300 each/day
Attenuators	2 each/day
Shoulder Corrugations, Ground or Cut	8 km-9.7 km/side/day
Aggregate Base	2900 m^2/day
Aggregate Shoulders	350 m^3/day
Freeway Signing - 3# Post Type	50 signs/day

Concrete Joint Repair(High Production-Projects with > 1000 patches)

Average(1.8m)	50 patches/day
Large(>1.8m)	500 m2/day

Bridge Painting	90 m2/day
Pin and Hanger Replacement	3 beams/day
Order Pin & Hanger	60 days
Bridge Repair	
Scarifying(Including Clean up)	10000 m2/day
Joint Removal(Including Clean up)	4 m/day
Forming & Placement	3.5 m/day
Hydro-Demolishing	300 m/day
Barrier Removal	15 m/day
Placement	45 m/day
Hand Chipping (Other than Deck)	.24 m^3/person/day
Shoulder Corrugations, Ground or Cut	8 km-9.7 km/side/day
Casting Latex Overlay	250 m/day
Curing Overlay	
Regular	4 days
High Early	1 day
Thrie Beam Retrofit	30 m/day
Beam End Repairs	
Welded Repairs	.75 days/repair
Bolted Repairs	.50 days/repair
Bolted Stiffeners (Pair)	.25 days/repair
Grind Beam Ends	.25 days/repair
Welded Stiffeners (Pair)	.25 days/repairH-
Pedestal Repairs:	
Welded Repair	.50 days/each
Replacement	1 day/each
Deck Removal	235 m^2/day
Surfacing-Bituminous	
Metro-Primary(<18000mtons)	
Paving	540 mtons/day
Joints	150 m/day
Cold Milling	3400 m2/day
Aggregate Shoulders	900 mtons/day
Metro Primary(>18000mtons)	
Paving	540 mtons/day
Joints	200 m/day
Cold Milling	7500 m2/day
Metro Interstate(>18000mtons)	
Paving	1100 mtons/day
Joints	360 m/day

Aggregate Shoulders	900 mtons/day
Urban Primary(<18000mtons)	
Paving	640 mtons/day
Joints	100 m/day
Cold Milling	1700 m2/day
Rubblizing	1700 m2/day
Aggregate Shoulders	450 mtons/day
Urban Primary(>18000mtons)	
Paving	1000 mtons/day
Joints	120 m/day
Cold Milling	1700 m2/day
Aggregate Shoulders	500 mtons/day
Urban Interstate(>18000mtons)	
Paving	1200 mtons/day
Joints	220 m/day
Cold Milling	1700 m2/day
Rubblizing	5800 m2/day
Aggregate Shoulders	640 mtons/day
Rural Primary(<18000mtons)	
Paving	640 mtons/day
Joints	120 m/day
Cold Milling	590 mtons/day
Crush & Shape	10000 m2/day
Aggregate Shoulders	640 mtons/day
Rural Primary(>18000mtons)	
Paving	1100 mtons/day
Joints	150 m/day
Cold Milling	800 mtons/day
Crush & Shape	10000 m2/day
Rural Interstate(>18000mtons)	
Paving	1280 mtons/day
Joints	220 m/day

B. WORKSHEET

WORK DAY/COMPLETION DATE DETERMINATION

CS: _____ JN:

DESCRIPTION OF WORK: _____

MAJOR WORK ITEM	PRODUCTION QUANTITY	RATE	ESTIMATED TIME

TOTAL ESTIMATED TIME:

COMPLETION DATE: _____ (Calendar Days or Work Days)

COMMENTS:

_____
_____
_____
_____
_____

C. MDOT CALENDARS

The following are the MDOT 4, 5 and 6 day calendars:

CALENDAR	DESCRIPTION	START	FINISH
1	Std - Apr 16 - Nov 15 - 4 day	APR 16	N0V 15
2	LP - Bit Stab - 4 day	MAY 15	OCT 15
3	UP - Bit Stab - 4 day	JUN 01	OCT 01
4	LP S of M-46 - Bit Pave - 4 day	MAY 05	NOV 15
5	LP N of M-46 - Bit Pave - 4 day	MAY 15	NOV 01
6	UP - Bit Pave - 4 day	JUN 01	OCT 15
7	LP - Bit Seal Coat - 4 day	JUN 01	SEP 15
8	UP - Bit Seal Coat - 4 day	JUN 15	SEP 01
9	Tree Planting - Deciduous - 4 day	MAR 01 OCT 01	MAY 15 NOV 15
10	Tree Planting - Evergreen - 4 day	MAR 01	JUN 01
11	South LP - Restoration - 4 day	MAY 01	OCT 10
12	North LP - Restoration - 4 day	MAY 01	OCT 01
13	UP - Restoration - 4 day	MAY 01	SEP 20
14	Full Year - Winter Work - 4 day	JAN 01	DEC 31
21	Std - Apr 16 - Nov 15 - 5 day	APR 16	NOV 15
22	LP - Bit Stab - 5 day	MAY 15	OCT 15
23	UP - Bit Stab - 5 day	JUN 01	OCT 01
24	LP S of M-46 - Bit Pave - 5 day	MAY 05	NOV 15
25	LP N of M-46 - Bit Pave - 5 day	MAY 15	NOV 01
26	UP - Bit Pave - 5 day	JUN 01	OCT 15
27	LP - Bit Seal Coat - 5 day	JUN 01	SEP 15
28	UP - Bit Seal Coat - 5 day	JUN 15	SEP 01
29	Tree Planting - Deciduous - 5 day	MAR 01 OCT 01	MAY 01 NOV 15

30	Tree Planting - Evergreen - 5 day	MAR 01	JUN 01
31	South LP - Restoration - 5 day	MAY 01	OCT 10
32	North LP - Restoration - 5 day	MAY 01	OCT 01
33	UP - Restoration - 5 day	MAY 01	SEP 20
34	Full Year - Winter Work - 5 day	JAN 01	DEC 31
35	Full Year - Expedited - 6 day	JAN 01	DEC 31

ATTACHMENT F
CS 81082 JN 46086C
M-17 between US-12BR Michigan Avenue and US-12 in Ypsilanti Township, City of Ypsilanti, Washtenaw County

MONTHLY PROGRESS REPORTS

The first two pages of this attachment are the necessary layout of the Monthly progress reports and the last three pages are a completed example.

Control Section 00000
Job Number 00000C
Structure Number S00
Date 00/00/00

MONTHLY PROGRESS REPORT

A. Work accomplished during the previous month.

B. Anticipated work items for the upcoming month.

C. Real or anticipated problems on the project.

D. Update of previously approved detailed project schedule (attached), including explanations for any delays or changes.

E. Items needed from MDOT.

F. Copy of Verbal Contact Records for the period (attached).

Structure Number - Control Section - Job Number
Route, Location Description
Design Schedule as of 00/00/95

LIST TASKS, SUBMITTALS, APPROVALS AND MEETINGS AS OUTLINED IN SCOPE OF DESIGN SERVICES AS NEEDED. THIS LIST IS JUST AN EXAMPLE.

Original Authorized Start Date	Original Authorized Finish Date	(Anticipated) or **Actual** Start Dates	(Anticipated) or **Actual** Finish Dates	Task	Task Description
00/00/00	**00/00/00**	00/00/00	**00/00/00**	??	Initial project meeting.
00/00/00	**00/00/00**	00/00/00	**00/00/00**	3330	Conduct Design Survey..
00/00/00	**00/00/00**	00/00/00	**00/00/00**	3360	Prepare Base Plans
00/00/00	**00/00/00**	00/00/00	**00/00/00**		Submit Base Plans
00/00/00	**00/00/00**	00/00/00	**00/00/00**	3580	Develop Preliminary Plans
00/00/00	**00/00/00**	00/00/00	**00/00/00**	3390	Develop Construction Zone Traffic Control Concepts
00/00/00	**00/00/00**	00/00/00	**00/00/00**	3540	Develop Construction Zone Traffic Control Plan
00/00/00	(00/00/00)	00/00/00	**00/00/00**	3550	Develop Preliminary Traffic Operations Plan.
00/00/00	(00/00/00)	00/00/00	**00/00/00**	3351	Review & Submit of Preliminary Right-Of-Way Plans.
00/00/00	(00/00/00)	00/00/00	**00/00/00**		Submittal of The Plan Review Package.
00/00/00	(00/00/00)	00/00/00	**00/00/00**		Completion of the Plan Review Meeting.
00/00/00	(00/00/00)	00/00/00	**00/00/00**	3840	Develop Final Plans and Specifications
00/00/00	(00/00/00)	00/00/00	**00/00/00**		Submittal of final plans/proposal package to MDOT for final review.
00/00/00	**00/00/00**	00/00/00	**00/00/00**	3870	Omissions/Errors Check (OEC) Meeting
00/00/00	**00/00/00**	00/00/00	**00/00/00**		Consultant=s Plan Completion: Final Construction Plan/Proposal package with recommendations incorporated to MDOT (two weeks after OEC Meeting)

Control Section 12345
Job Number 11111C
Structure Number S02
Date 07/31/95

MONTHLY PROGRESS REPORT

A. Work accomplished during the previous month.

1. During the last month we completed the Final Right of Way plans and submitted them to Thomas Nelson, Jr. on 05/01/99.

B. Anticipated work items for the upcoming month.

1. Submit the Preliminary Plans and related material on 03/11/99.

2. Attend the meeting regarding the Ameritech lines on the bridge, scheduled for 03/12/99.

C. Real or anticipated problems on the project.

1. We foresee no problems at this time.

D. Update of previously approved detailed project schedule (attached), including explanations for any delays or changes.

1. The design is falling behind schedule because we had problems resolving the geometries of the ramps in relation to the bridge. The Preliminary Plan submittal will be the only task affected by this delay because we will make up the lost time prior to submitting the Final Plans and Specifications.

E. Items needed from MDOT.

1. Prior to final Plan submittal we will need the latest Special provision and Supplemental Specification checklist.

F. Copy of Verbal Contact Records for the period (attached).

1. Discussed bridge and ramp geometries with Tom Myers of M$DOT Traffic and Safety Division on 07-24-95.

SN: S02 - CS: 12345 - JN: 11111C
M-111, from There Village Limits to north of That Road
Design Schedule as of 07/31/95

Original Authorized Start Date	Original Authorized Finish Date	(Anticipated) or **Actual** Start Dates	(Anticipated) or **Actual** Finish Dates	Task	Task Description
01/12/95	01/12/95	**01/12/95**	**01/12/95**??	Initial project meeting.	
01/29/95	01/29/95	**01/30/95**	**01/30/95**3330	Conduct Design Survey.	
02/17/95	04/10/95	**02/17/95**	**04/20/95**3360	Prepare Base Plans.	
02/29/95	02/29/95	**02/29/95**	**02/29/95**3390	Develop the Construction Zone Traffic Control Concepts	
03/12/95	03/13/95	**03/12/95**	(03/30/95)	3540	Develop Construction Zone Traffic Control Plan
03/20/95	03/19/95	**03/25/95**	(03/30/95)	3551	Develop/Review Preliminary Traffic Signal Plan
07/01/95	07/01/95	(07/01/95)	(07/01/95)	3590	The Plan Review Meeting
07/11/95	08/11/95	(07/11/95)	(08/11/95)	3821	Complete/Review Traffic Signal Plan
09/15/95	09/15/95	(09/15/95)	(09/15/95)	3830	Complete Construction Zone Traffic Control Plan.
09/16/95	09/16/95	(09/16/95)	(09/16/95)	3840	Develop Final Plans and Specifications
09/25/95	09/23/95	(09/25/95)	(09/25/95)	3870	Omissions/Errors Check (OEC) Meeting

VERBAL CONTACT RECORD

Control Section 12345
Job Number 11111C
Structure Number S02
Date 07/31/95

Joe Engineer talked to Tom Myers and decided to use a 0.05'/ft super on ramp A leading into the bridge.

P/PMS TASK - INDEX - VERSION 2 rev 2

ISSUED 9/29/2000

P/PMS TASK	CURRENT DATE	LATEST REVISION DATE
3120 - CONDUCT STRUCTURE DECK CONDITION SURVEY	07/29/99	
3330 - CONDUCT DESIGN SURVEY	07/29/99	
3340 - CONDUCT STRUCTURE SURVEY	07/29/99	
3350 - CONDUCT HYDRAULICS SURVEY	07/29/99	
3360 - PREPARE BASE PLANS	06/22/99	
3361 - REVIEW AND SUBMIT PRELIMINARY RIGHT OF WAY (PROW) PLANS	07/16/99	
3370 - PREPARE STRUCTURE STUDY	06/16/99	
3380 - REVIEW BASE PLANS	06/29/99	
3390 - DEVELOP THE CONSTRUCTION ZONE TRAFFIC CONTROL CONCEPTS	07/16/99	
3510 - PERFORM ROADWAY GEOTECHNICAL INVESTIGATION	07/29/99	
3520 - CONDUCT HYDROLOGIC, HYDRAULIC AND SCOUR ANALYSES	08/29/00	revised per P. Schriner
3530 - CONDUCT FOUNDATION STRUCTURE INVESTIGATION	07/16/99	
3540 - DEVELOP CONSTRUCTION ZONE TRAFFIC CONTROL PLAN	07/16/99	
3551 - DEVELOP/REVIEW PRELIMINARY TRAFFIC SIGNALS PLAN	07/16/99	added to index 1/5/2000
3552 - DEVELOP PRELIMINARY PERMANENT PAVEMENT MARKING PLAN	07/16/99	
3553 - DEVELOP PRELIMINARY NON - FREEWAY SIGNING PLAN	07/16/99	
3554 - DEVELOP PRELIMINARY FREEWAY SIGNING PLAN	07/16/99	
3570 - PREPARE PRELIMINARY STRUCTURE PLANS	07/16/99	
3580 - DEVELOP PRELIMINARY PLANS	06/30/99	
3581 - FINAL RIGHT-OF-WAY PLANS	07/16/99	

P/PMS TASK	CURRENT DATE	LATEST REVISION DATE
3590 - REVIEW PRELIMINARY PLANS	06/29/99	
3670 - DEVELOP MUNICIPAL UTILITY PLANS	06/30/99	
3675 - DEVELOP ELECTRICAL PLANS	07/01/99	
3710 - DEVELOP REQUIRED MITIGATION (FOR INFORMATION ONLY, THIS IS NOT A CONSULTANT TASK)	07/16/99	
3720 - SUBMIT ENVIRONMENTAL PERMIT APPLICATIONS (FOR INFORMATION ONLY, THIS IS NOT A CONSULTANT TASK)	07/16/99	
3821 - COMPLETE/REVIEW TRAFFIC SIGNAL PLANS	07/16/99	
3822 - COMPLETE PERMANENT PAVEMENT MARKING PLAN	07/16/99	
3823 - COMPLETE NON-FREEWAY SIGNING PLAN	07/16/99	
3824 - COMPLETE FREEWAY SIGNING PLAN	07/16/99	
3830 - COMPLETE CONSTRUCTION ZONE TRAFFIC CONTROL PLAN	06/22/99	
3840 - DEVELOP FINAL PLANS AND SPECIFICATIONS	07/02/99	
3850 - DEVELOP STRUCTURE FINAL PLANS AND SPECIFICATIONS	07/29/99	
3870 - HOLD OMISSIONS/ERRORS CHECK (OEC) MEETING	07/13/99	
4120 - OBTAIN PRELIMINARY TITLE COMMITMENTS	06/29/99	
4130 - PREPARE MARKED FINAL R.O.W. PLANS	06/29/99	
4140 - PREPARE PROPERTY LEGAL INSTRUMENTS	06/29/99	
5010 - CONSTRUCTION PHASE ENGINEERING ASSISTANCE	07/29/99	